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Farmers' Bulletin 1100

United States Department of Agriculture

COOPERATIVE MARKETING OF WOODLAND PRODUCTS

FARMERS' COOPERATIVE ORGANIZATIONS for the marketing of farm produce have increased in number very rapidly in recent years. Certain kinds of produce are now very commonly marketed through associations. Woodland products also may be marketed in this manner. In fact some cooperative shingle mills are already in operation, and box factories maintained for the supplying of boxes to fruit growers at cost might be considered cooperative enterprises.

Much more might be done in this line, and this bulletin points out that what has been done in the cooperative marketing of other farm products can be done with woodland products also, with benefit both to the farmer and to the woodlands.

Contribution from the Forest Service
HENRY S. GRAVES, Forester
Washington, D. C. - - March, 1920

COOPERATIVE MARKETING OF WOODLAND PRODUCTS.

A. F. HAWES,
Extension Specialist in Forestry.

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MUCH PROGRESS has been made during the last few years in the cooperative marketing of farm produce, such as dairy products, fruit, potatoes, and live stock. That so little progress has been made in the cooperative marketing of forest products should not lead to the inference that such an arrangement is not as practicable for these products as for other kinds of farm output. It was natural that farmers should unite first to sell the crops and other products upon which they rely for their regular income. Woodland products they have always considered secondary; they have felt that anything obtained from the woods was in the nature of an extra dividend, and have been satisfied even if it was not as large as it should have been. Obviously, this is an unwise attitude to take. As timber products become scarce and increase in value, farmers will desire to make their woodlands a regular income-producing part of the farm, and will study the best methods of marketing. The purpose of this bulletin is to point out briefly what has been done in the cooperative marketing of other farm produce and to suggest an organization and methods adapted to the marketing of woodland products.

A survey undertaken by the Bureau of Markets in 1914 showed that there were approximately 12,500 farmers' purchasing and marketing organizations in the country. Of the 5,424 organizations which reported, 1,637 were grain elevators and warehouses; 1,708 were creameries and cheese factories; 275 were stores; 871 handled fruit and produce; 213 cotton; 43 tobacco; 96 live stock, and 581 were miscellaneous associations.

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NEED OF FOREST PRODUCTS ASSOCIATIONS.

It is noticeable that forest products are not mentioned in the list of associations secured by the Bureau of Markets. There are, however, in the Middle West,[1] "farmers' cooperative companies," classed in the list as "stores," which buy lumber either as a sole product or with other products. Their object is to secure lower prices for the merchandise the farmer consumes. Approximately 10 per cent of the farmers' companies in the Middle West handle lumber. The number of these companies retailing lumber in 1915 was five times as

FIG. 1.—The portable sawmill operated by a cooperative association may be an effective agency for the proper development of a forest.

great as in 1910. As a rule, the benefits of the low prices at which they sell are shared by the community, since few of them restrict their sales to their own members.

The efficiency of these buying organizations may very well indicate to the farmer in the wooded regions the advantage of the selling organizations advocated in this bulletin. There are few products of the soil the marketing of which would be more aided by the formation of cooperative marketing associations than forest products. Two considerations are of fundamental importance: (1) As ordinarily handled, the yield is not an annual one and the woodland owner is not in touch with the market. (2) Because of their bulk

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and weight, the transportation of logs is expensive and, therefore, the market is restricted geographically.

The small woodland owner is not in a position to study the market for his finished product, because the quantity is not sufficient to

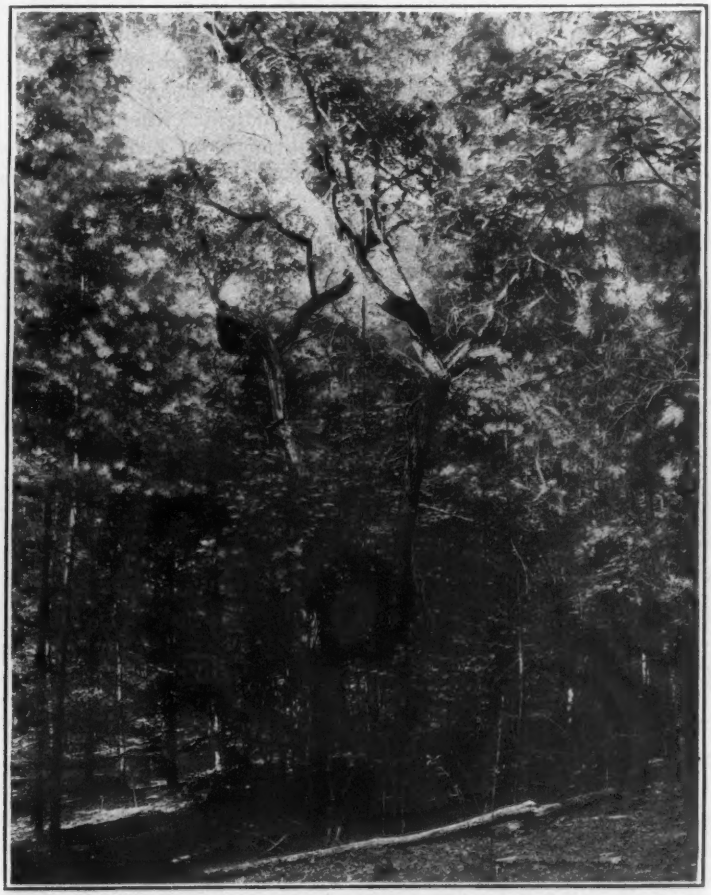

FIG. 2.—The proper handling of the forest requires the disposal of inferior trees, which can only be done profitably by the development of a special market.

justify the necessary expense. He has resorted, therefore, to the easiest though least profitable ways of disposing of his forest products. These methods may be summarized as follows:

(1) Sale of the woodland or farm to a millman for a lump sum.
(2) Sale of standing timber for a lump sum.
(3) Sale of standing trees or stumpage by a unit of measure, as thousand feet, cords, etc.
(4) Sale of logs by the thousand feet, delivered at a mill.

It is obvious that a millman who is in the business of buying timber can estimate the contents of a stand much more accurately than the ordinary owner can, and that he will usually have the advantage in any such transaction. Instances are numerous of timber sold in lump bringing less than half the stumpage value; and in many cases the discrepancy has been even greater. The sale of standing trees by the thousand feet is a satisfactory method for a distant owner, or for one not equipped for handling the operations of cutting and hauling. In the case of most farmers who are woodland owners, however, these operations furnish desirable employment for men and teams when farm work is slack. For such owners the sale of stumpage is not desirable.

FIG. 3.—Stockyard, showing the finished product, ready for shipment, made from mill waste. Mop handles, chair legs, and chair dowels. Beech, birch, and maple.

For the average woodland owner it is more profitable either to sell the logs delivered at a mill or to employ a mill and sell the product. The difficulties in the way of such a woodland owner being both a successful operator and millman are: (1) He knows very little about the market requirements, has no sales agent, and does not know where there is the best demand for his products. (2) He knows nothing about lumber grades, and can not grade the lumber. (3) He usually does not have enough of the various grades to make up carload lots.

THE WORK OF A COOPERATIVE FOREST PRODUCTS ASSOCIATION.

The kind of forest products to be marketed will necessarily vary in different sections. In the majority of cases, however, lumber will form the chief product. Hence, forest products associations should

employ a competent manager who is well acquainted with the lumber business and able to grade lumber. His first duty would be, in cooperation with the various woodland owners of the association, to make a careful survey of the timber controlled by the association. This survey should include an estimate of the various species, and, so far as possible, of the different grades present. It should also take into consideration not only the main products, but those by-products that might accrue, as, for example, hemlock bark, charcoal, etc. The marketing situation should be carefully studied to determine whether the existing plants are sufficient to give the most profitable utilization, or whether additional equipment—machinery, auto

FIG. 4.—Shingle mill, showing engine, shingle saw, etc.

trucks, railroad sidings, etc.—are needed to give the best facilities. At certain seasons the manager should visit the near-by cities and wood-using industries and take orders in advance for the various classes of lumber which his association can produce. Information thus secured would be placed at the disposal of all members, and the amounts of lumber required would be allotted among them. At the time of sawing the manager would take charge of the grading. It would be necessary to keep a careful record of the amount of each grade of lumber furnished by the various members.

By combining forces in this way, an association would be able either to operate its own sawmill or to secure a lower rate on custom sawing. The advantage which the millman ordinarily has of being able to dispose of his various grades in car lots would accrue to the association. Such an association would also be in a position to secure

the best freight rates possible, to utilize better advertising media than are usually available to the small woodland owner, and to make use of better business methods than he can afford.

The value of logs delivered at the mill and the grade of logs that can be sold at a profit depend on the character of the mill and the form in which the lumber is to be sold. The small mill that can manufacture only rough lumber, and this in such small quantities that it must be sold without grading, can afford to handle only high-grade logs and pay only minimum prices. On the other hand, the mill that is equipped for manufacturing a large variety of products, and has worked up a trade so that it can ship graded and partially manufactured lumber in carload lots, is able not only to use a much lower grade of logs profitably but to pay more for any given grade of logs.

Because of its misuse, the portable sawmill has a very unenviable reputation. The owner of a portable mill ordinarily has no permanent interest in the woodlands in which he has been operating. His habit has been either to buy the standing timber alone and cut it off as soon as possible, or to buy a woodland, strip it, and then dispose of the land. Under such a system there was no incentive for woodland improvement. His profit has often been a speculative one, secured because of his ability to buy timber at less than its real value, rather than as a legitimate return from manufacturing.

Used properly by a cooperative association, the portable mill may well become a beneficial instrument in the handling of a forest. The manager of the association, knowing the amount of the various kinds of lumber that he can market to advantage, may place a mill of this kind in a valley and cut only such a quantity of lumber as will be in keeping with the productive capacity of the woodlands. The next season the mill may be transported to another section, and so on for a series of years. It may then be brought back for a second cut in the first valley, when the reserved growth has had an opportunity to develop.

It must not be supposed that the advantages of such an association are wholly commercial in the narrow sense of the term. If the woodlands are made more profitable to their present owners, these owners will be encouraged to raise more and better lumber, and future woodland owners, in their turn, and the public as a whole, will benefit thereby. Nor is it the object of a cooperative association to do away with the independent millman. It has no desire to eliminate a legitimate sawmill business. In the scheme of things as outlined in this bulletin, the sawmill man has a place as a manufacturer and he may be as constructive a factor in a community as he has sometimes been destructive. But the speculative feature of the sawmill business has been injurious to the forests and baneful to the industry

itself. This feature the cooperative marketing association would eliminate.

In some sections lumber may be of less importance than some of the other forest products, such as railroad ties, pulpwood, tanning-extract wood, fuelwood, fence posts, telephone and telegraph poles, piling, etc. It will often be possible for an association to serve its own members by supplying them with fence posts or building material for barns, silos, etc. In fruit-growing regions farmers are frequently charged very high prices for boxes and barrels. The machinery for making these is usually too expensive for an individual fruit grower to buy, but would be well within the reach of an association, and the making of their own containers would enable the members to pack their fruit at a reduced cost. The same principles apply to containers for butter and certain other kinds of farm produce.

ORGANIZATION OF A COOPERATIVE ASSOCIATION.

An association of woodland owners should represent a sufficient amount of timber to operate for a considerable term of years, if not indefinitely, the particular line of industry it is proposed to undertake. The amount of timber necessary would depend entirely upon the kind of industry adopted and the length of time it was intended to run. Thus, a regular sawmill industry that is to be run on a permanent basis must have a large supply of timber available, whereas a portable mill could be run for a few years on a relatively small amount. An industry that works up a finished product, such as butter tubs or shoe lasts, would require less timber than a sawmill. While it is conceivable that it might pay to organize a cooperative association to market 5,000,000 feet of lumber, the product of perhaps 1,000 acres of woodland, it is evident that an organization would mean vastly more in profit, convenience, and possibility of forestry practice to the owners of 25,000,000 feet. In any case, the capital to be invested in equipment would depend, of course, upon the amount of timber available for manufacture. The ideal arrangement would be so to operate all holdings of the association that the average annual cut would not exceed the yearly growth. Members should bind themselves to cut in accordance with forestry principles so that the productive capacity of the woodlands would be kept up.

Unlike a noncooperative stock company in which each share usually has a vote,[1] a cooperative organization is ordinarily one in which all members have equal voting power. This association would admit as members all woodland owners so situated as to be able to

[1] Separate from Yearbook, U. S. Department of Agriculture, 1917, No. 738, Cooperative Marketing: Where? When? How?

take advantage of the association's opportunities, whether of manufacture or shipping. No one would be allowed to buy stock in the association who was not a woodland owner. The owner of 1 share would have the same voice in the handling of the business as the owner of 10 or more shares.

While noncooperative stock companies distribute their profits in the form of dividends on their capital stock, cooperative organizations having capital stock limit the dividends to a fair rate of interest on the capital invested, and distribute the surplus, if there be any, on the basis of the business done by each member through the

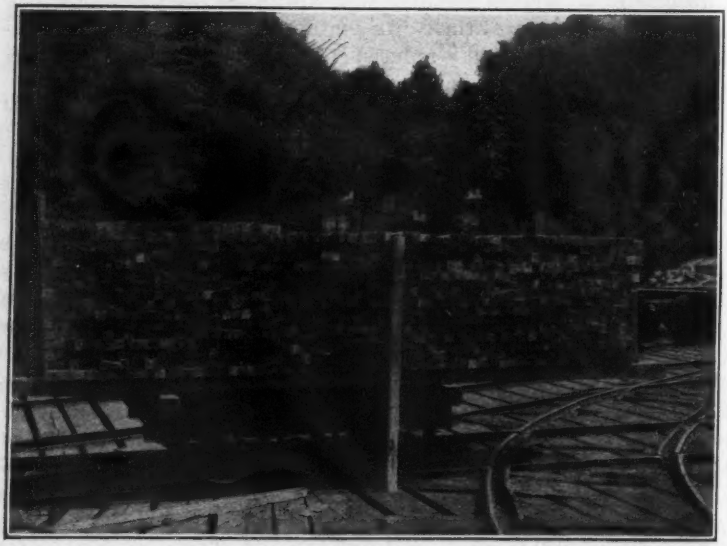

FIG. 5.—A cooperative association could advantageously manufacture the squares for turning without undertaking the turning business itself.

association. On this plan the man who furnished $1,000 worth of business would receive ten times as much of this surplus as the man who furnished only $100 worth of business. The association should limit the transfer of shares of stock wherever this is permissible under the law. A member would have the right to give away or retain for his own use such woodland products as he may wish, but he could not sell to any outside parties any products he has promised to the association, except such products as are not accepted by the association.

A manager should be employed by the board of directors and should have large powers. He should be the expert on marketing the product of the association, and should make arrangements for its manufacture, grading, shipping, etc. He should enter into con-

tracts for the sale of the association products, subject only to the action of the board of directors and to the by-laws and rules of the association. He should give a surety bond in excess of the value of property he is likely to handle at any one time. The cost of such a bond may be paid for by the association.

FINANCING A COOPERATIVE ASSOCIATION.

The amount of capital required to finance the operations of a cooperative association will necessarily vary according to the lines of business to be pursued. If, for example, the association makes an arrangement with some local millman to saw the lumber for its members, it will not need capital for the purchase of a plant. In this case its main function will be the shipping and sale of its product after the manner of many fruit-shipping associations, which pool their fruit according to grade and variety and prorate their receipts. If, on the other hand, a sawmill, turning plant, or other wood-using industry is to be operated by the association, considerable capital will be required to purchase a plant and to operate it. In any case the salary and expenses of the manager must be met, and a competent clerical force must be maintained, as it is very important to have accurate accounts of all transactions.

It is essential that an association shall be adequately financed either by the sale of stock or through loans. After the credit of an association has been established, it is possible to secure loans from the local banks upon association notes signed by the financial officers of the association. At first it is usually necessary to borrow upon notes based on the personal credit of members.

METHOD OF ORGANIZING.

There are ample opportunities for a great number of these cooperative associations in all of the woodland sections of the eastern part of the country, where the woodlands on farms aggregated 143,391,568 acres in 1910. To be sure, greater progress in cooperative organization has already been made along agricultural lines in the Middle West, and it may be easier to start this new movement in that section. However, the opportunities for usefulness are greater in the Northeast, where there are excellent markets far removed from the virgin timber of the South and Northwest, and where a greater part of the farms is wooded than in many sections of the country.

The machinery for interesting the farmers in all advance movements is becoming centered more and more in the extension services of the various agricultural colleges. With the increased funds available under the Smith-Lever Act, it should be possible for many of the

extension services to assist in the marketing of woodland products. In States having well-developed forestry departments the work can undoubtedly be conducted cooperatively by the State forestry depart-

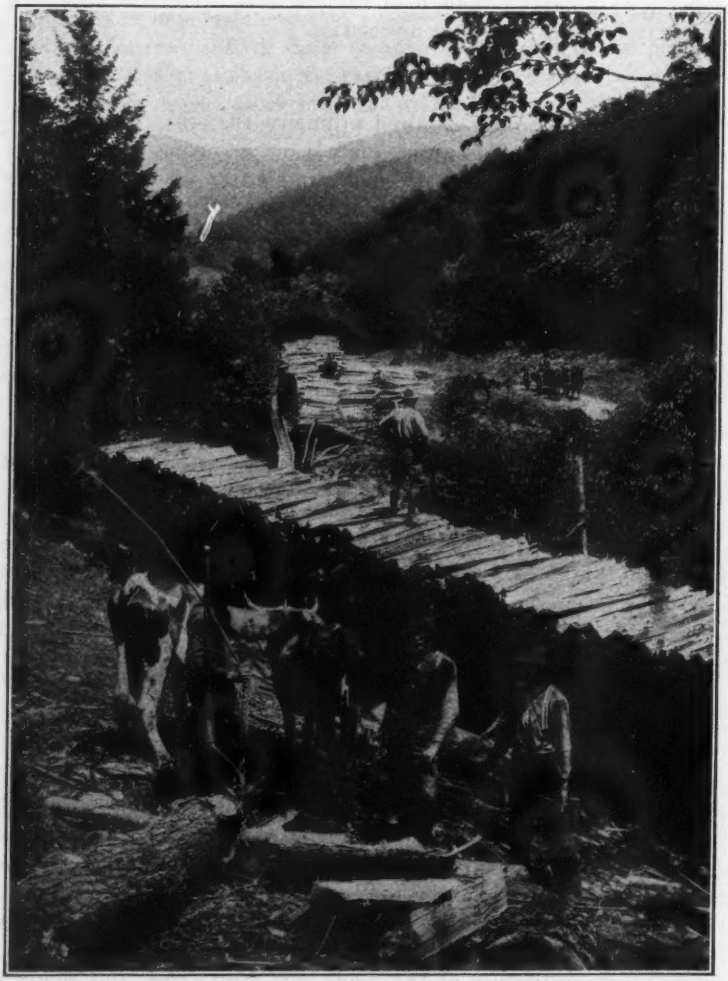

FIG. 6.—Acid wood and pulpwood corded on a flume.

ment and the extension service. The Bureau of Markets, through its field agents, is also in a position to aid in this work.

Marketing specialists might be employed who not only have had experience in the marketing of lumber and other woodland products, but are good organizers and have a working knowledge of forestry.

It would be the chief duty of such a specialist, in cooperation with the county agents, to organize cooperative associations and assist them in carrying on this work. He should devote his efforts at first to two or three counties selected by the county agents as most likely to be interested in this movement. More difficult counties, where there may be even more need for such associations, should be left until later. A few successful examples of cooperative associations will constitute a most convincing argument with the woodland owners of the State.

BENEFIT TO WOODLANDS MADE POSSIBLE BY COOPERATIVE MARKETING ASSOCIATIONS.

Through the cooperative marketing association there will be made possible practical application of much advice which woodland owners have received from foresters and from the literature published by the Department of Agriculture and the various States. The manager of the association, though not necessarily a trained forester himself, will have a working knowledge of the subject. He will be able to advise each owner as to which trees should be cut and which should be left for future growth. He will know what damage is done to trees by the more injurious insects and tree diseases, and will be able to assist the owners in a practical way in combating these forest enemies, and in helping to prevent their spread. He will thus render a great public service. When the oak in southern New England is attacked by the gipsy moth, or the chestnut of Pennsylvania by the chestnut-bark disease, or the white pine by the blister rust, the owners will be advised as to what they should do to meet these plagues. Manager and owners alike should get in touch with the State and Federal agencies having in charge the control of such pests or diseases. What and where these agencies are may be easily ascertained in every case by inquiry addressed to the State forester of any given State, or to the Secretary of Agriculture, Washington, D. C.

It will be the duty of the manager of an association whose territory is invaded by any injurious insect or disease to study the market conditions and devise ways of marketing such material that will be profitable to the owners. In some cases this will mean the introduction of special industries or machinery to work up the material. In many white pine forests which have been seriously infected by the weevil the trees are very crooked, yet the portions of the logs between the whorls of branches are of excellent quality for matches or other short material. When an association controls a sufficient amount of such material, it will be practicable to arrange for the introduction of an industry for working it up.

In many regions pine reproduces especially well under birch or other inferior trees which, in a few years, will kill out or seriously damage the pine if left to shade and rub against it. Under present conditions this birch is usually marketable for fuel alone, and for this it is only a second-rate wood. When a sufficient amount of birch is controlled by an association, it will be possible to introduce an inexpensive plant for making spool or bobbin stock, thus giving the owners a profit from the birch and a chance to free the pine and to make it much more profitable in the future.

Abandoned fields often reproduce to an exceedingly thick stand of spruce or pine, in which the trees are so closely crowded that their growth is seriously interfered with. Under the present conditions it is impracticable to thin such stands, because there is no market for the material cut. It may not always be possible even for an association to find an industry to utilize this material, but it will be easier for an association controlling a large area than for a single owner.

COOPERATIVE MARKETING AND COMMUNITY DEVELOPMENT.

Not the least valuable result to be expected from cooperative forest products associations is the establishment of permanent local industries and the attendant prosperity of the community as a whole, in sharp contrast to the exploitation of forests by temporary industries and imported labor.

This country has much to learn from such countries as France regarding the proper handling of woodlands and the development of permanent local industries. "The lumber industry in France is composed of many enterprises, stable and permanent in character, and adapted in size to utilize the material that regularly may be taken from the forests. Compared to American standards, individual sawmills and their contributing logging operations are small. The industry, however, has become an essential factor in the community. Labor is local and permanent. Many persons work in the woods and in the mills a part of the time and at other seasons on the farms and in other undertakings. Thus, in many mountain sections, the woods work is pretty largely carried on by the peasants. The trees are cut at one time of the year and brought to the roads, and later on are hauled out by the peasants when their oxen, horses, or mules are not used for farm or other work. So, also, many local people work part time in the sawmills and the concerns that make a great variety of products from the forests."[1]

[1] Effect of the War on the Forests of France, by Col. H. S. Graves, American Forestry, December, 1918, vol. 24, No. 300.

Throughout France are local industries manufacturing a great variety of articles from wood. The manufacture of barrels and casks is of great importance in the wine-growing section. Furniture and cabinet shops are found in nearly all large towns and in many small ones. Quantities of wood are used in the manufacture of wooden shoes and wooden soles and heels. In addition to these and other industries using wood on a large scale, there are thousands of small woodenware factories and a multitude of home industries that use wood. Great quantities of toys, fans, paper knives, brushes, spoons, handles, spindles, funnels, and boxes of various kinds are turned out by the farmer-workmen all over France. Wood is obtained from the nearby forests and mills, the peasant workers having their own lathes which they use at odd times.

In the United States the tendency in the past has been too much to develop the wood-using industries as temporary affairs entirely apart from the community life. Forest resources have been exploited on such a large scale that imported labor has been required to supplement the local labor. The result is that after a few years' operations the timber resources are gone, and there is no profitable winter work for the farmers. This has been one of the important causes for the abandonment of farms and of whole communities in the less favorable agricultural regions. Certain localities in New England, Pennsylvania, and other States illustrate this regrettable condition.

It is not claimed that cooperative marketing associations alone will rectify all the mistakes of the past, but it is believed that they may be of great service in building up permanent wood-using industries near the bases of supplies, and in developing more prosperous rural communities.

WASHINGTON : GOVERNMENT PRINTING OFFICE : 1920

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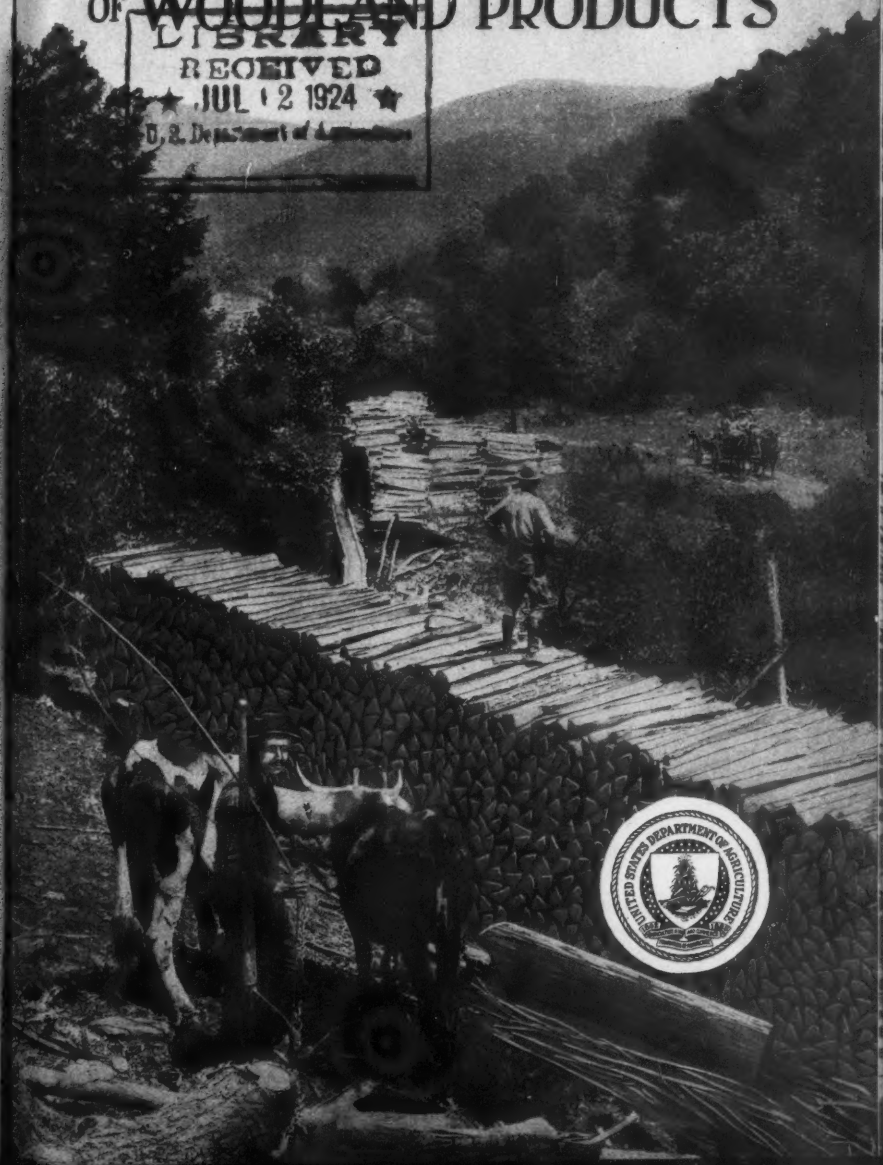

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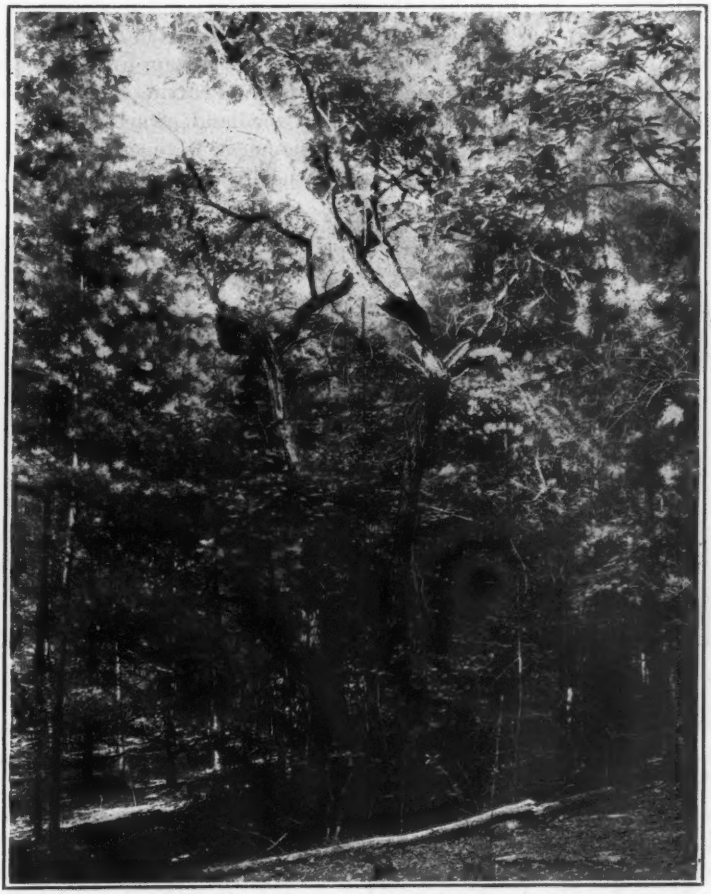

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By combining forces in this way, an association would be able either to operate its own sawmill or to secure a lower rate on custom sawing. The advantage which the millman ordinarily has of being able to dispose of his various grades in car lots would accrue to the association. Such an association would also be in a position to secure

the best freight rates possible, to utilize better advertising media than are usually available to the small woodland owner, and to make use of better business methods than he can afford.

The value of logs delivered at the mill and the grade of logs that can be sold at a profit depend on the character of the mill and the form in which the lumber is to be sold. The small mill that can manufacture only rough lumber, and this in such small quantities that it must be sold without grading, can afford to handle only high-grade logs and pay only minimum prices. On the other hand, the mill that is equipped for manufacturing a large variety of products, and has worked up a trade so that it can ship graded and partially manufactured lumber in carload lots, is able not only to use a much lower grade of logs profitably but to pay more for any given grade of logs.

Because of its misuse, the portable sawmill has a very unenviable reputation. The owner of a portable mill ordinarily has no permanent interest in the woodlands in which he has been operating. His habit has been either to buy the standing timber alone and cut it off as soon as possible, or to buy a woodland, strip it, and then dispose of the land. Under such a system there was no incentive for woodland improvement. His profit has often been a speculative one, secured because of his ability to buy timber at less than its real value, rather than as a legitimate return from manufacturing.

Used properly by a cooperative association, the portable mill may well become a beneficial instrument in the handling of a forest. The manager of the association, knowing the amount of the various kinds of lumber that he can market to advantage, may place a mill of this kind in a valley and cut only such a quantity of lumber as will be in keeping with the productive capacity of the woodlands. The next season the mill may be transported to another section, and so on for a series of years. It may then be brought back for a second cut in the first valley, when the reserved growth has had an opportunity to develop.

It must not be supposed that the advantages of such an association are wholly commercial in the narrow sense of the term. If the woodlands are made more profitable to their present owners, these owners will be encouraged to raise more and better lumber, and future woodland owners, in their turn, and the public as a whole, will benefit thereby. Nor is it the object of a cooperative association to do away with the independent millman. It has no desire to eliminate a legitimate sawmill business. In the scheme of things as outlined in this bulletin, the sawmill man has a place as a manufacturer and he may be as constructive a factor in a community as he has sometimes been destructive. But the speculative feature of the sawmill business has been injurious to the forests and baneful to the industry

itself. This feature the cooperative marketing association would eliminate.

In some sections lumber may be of less importance than some of the other forest products, such as railroad ties, pulpwood, tanning-extract wood, fuelwood, fence posts, telephone and telegraph poles, piling, etc. It will often be possible for an association to serve its own members by supplying them with fence posts or building material for barns, silos, etc. In fruit-growing regions farmers are frequently charged very high prices for boxes and barrels. The machinery for making these is usually too expensive for an individual fruit grower to buy, but would be well within the reach of an association, and the making of their own containers would enable the members to pack their fruit at a reduced cost. The same principles apply to containers for butter and certain other kinds of farm produce.

ORGANIZATION OF A COOPERATIVE ASSOCIATION.

An association of woodland owners should represent a sufficient amount of timber to operate for a considerable term of years, if not indefinitely, the particular line of industry it is proposed to undertake. The amount of timber necessary would depend entirely upon the kind of industry adopted and the length of time it was intended to run. Thus, a regular sawmill industry that is to be run on a permanent basis must have a large supply of timber available, whereas a portable mill could be run for a few years on a relatively small amount. An industry that works up a finished product, such as butter tubs or shoe lasts, would require less timber than a sawmill. While it is conceivable that it might pay to organize a cooperative association to market 5,000,000 feet of lumber, the product of perhaps 1,000 acres of woodland, it is evident that an organization would mean vastly more in profit, convenience, and possibility of forestry practice to the owners of 25,000,000 feet. In any case, the capital to be invested in equipment would depend, of course, upon the amount of timber available for manufacture. The ideal arrangement would be so to operate all holdings of the association that the average annual cut would not exceed the yearly growth. Members should bind themselves to cut in accordance with forestry principles so that the productive capacity of the woodlands would be kept up.

Unlike a noncooperative stock company in which each share usually has a vote,[1] a cooperative organization is ordinarily one in which all members have equal voting power. This association would admit as members all woodland owners so situated as to be able to

[1] U. S. Department of Agriculture, Bulletin 1106, Legal Phases of Cooperative Associations, 1922.

take advantage of the association's opportunities, whether of manufacture or shipping. No one would be allowed to buy stock in the association who was not a woodland owner. The owner of 1 share would have the same voice in the handling of the business as the owner of 10 or more shares.

While noncooperative stock companies distribute their profits in the form of dividends on their capital stock, cooperative organizations having capital stock limit the dividends to a fair rate of interest on the capital invested, and distribute the surplus, if there be any, on the basis of the business done by each member through the

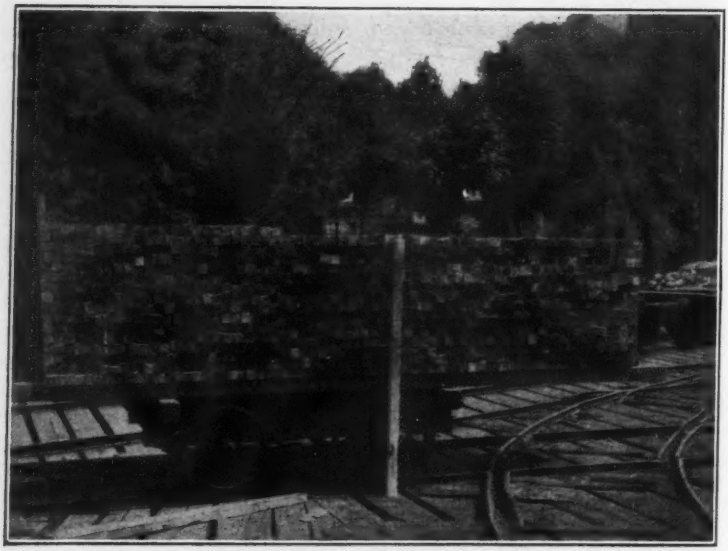

FIG. 5.—A cooperative association could advantageously manufacture the squares for turning without undertaking the turning business itself.

association. On this plan the man who furnished $1,000 worth of business would receive ten times as much of this surplus as the man who furnished only $100 worth of business. The association should limit the transfer of shares of stock wherever this is permissible under the law. A member would have the right to give away or retain for his own use such woodland products as he may wish, but he could not sell to any outside parties any products he has promised to the association, except such products as are not accepted by the association.

A manager should be employed by the board of directors and should have large powers. He should be the expert on marketing the product of the association, and should make arrangements for its manufacture, grading, shipping, etc. He should enter into con-

tracts for the sale of the association products, subject only to the action of the board of directors and to the by-laws and rules of the association. He should give a surety bond in excess of the value of property he is likely to handle at any one time. The cost of such a bond may be paid for by the association.

FINANCING A COOPERATIVE ASSOCIATION.

The amount of capital required to finance the operations of a cooperative association will necessarily vary according to the lines of business to be pursued. If, for example, the association makes an arrangement with some local millman to saw the lumber for its members, it will not need capital for the purchase of a plant. In this case its main function will be the shipping and sale of its product after the manner of many fruit-shipping associations, which pool their fruit according to grade and variety and prorate their receipts. If, on the other hand, a sawmill, turning plant, or other wood-using industry is to be operated by the association, considerable capital will be required to purchase a plant and to operate it. In any case the salary and expenses of the manager must be met, and a competent clerical force must be maintained, as it is very important to have accurate accounts of all transactions.

It is essential that an association shall be adequately financed either by the sale of stock or through loans. After the credit of an association has been established, it is possible to secure loans from the local banks upon association notes signed by the financial officers of the association. At first it is usually necessary to borrow upon notes based on the personal credit of members.

METHOD OF ORGANIZING.

There are ample opportunities for a great number of these cooperative associations in all of the woodland sections of the eastern part of the country, where the woodlands on farms aggregated about 150,000,000 acres in 1920. To be sure, greater progress in cooperative organization has already been made along agricultural lines in the Middle West, and it may be easier to start this new movement in that section. However, the opportunities for usefulness are greater in the Northeast, where there are excellent markets far removed from the virgin timber of the South and Northwest, and where a greater part of the farms is wooded than in many sections of the country.

The machinery for interesting the farmers in all advance movements is becoming centered more and more in the extension services of the various agricultural colleges. With the increased funds available under the Smith-Lever Act, it should be possible for many of the

extension services to assist in the marketing of woodland products. In States having well-developed forestry departments the work can undoubtedly be conducted cooperatively by the State forestry depart-

FIG. 6.—Acid wood and pulpwood corded on a flume.

ment and the extension service. The Bureau of Agricultural Economics is also in a position to aid in this work.

Marketing specialists might be employed who not only have had experience in the marketing of lumber and other woodland products, but are good organizers and have a working knowledge of forestry.

It would be the chief duty of such a specialist, in cooperation with the county agents, to organize cooperative associations and assist them in carrying on this work. He should devote his efforts at first to two or three counties selected by the county agents as most likely to be interested in this movement. More difficult counties, where there may be even more need for such associations, should be left until later. A few successful examples of cooperative associations will constitute a most convincing argument with the woodland owners of the State.

BENEFIT TO WOODLANDS MADE POSSIBLE BY COOPERATIVE MARKETING ASSOCIATIONS.

Through the cooperative marketing association there will be made possible practical application of much advice which woodland owners have received from foresters and from the literature published by the Department of Agriculture and the various States. The manager of the association, though not necessarily a trained forester himself, will have a working knowledge of the subject. He will be able to advise each owner as to which trees should be cut and which should be left for future growth. He will know what damage is done to trees by the more injurious insects and tree diseases, and will be able to assist the owners in a practical way in combating these forest enemies, and in helping to prevent their spread. He will thus render a great public service. When the oak in southern New England is attacked by the gipsy moth, or the chestnut of Pennsylvania by the chestnut-bark disease, or the white pine by the blister rust, the owners will be advised as to what they should do to meet these plagues. Manager and owners alike should get in touch with the State and Federal agencies having in charge the control of such pests or diseases. What and where these agencies are may be easily ascertained in every case by inquiry addressed to the State forester of any given State, or to the Secretary of Agriculture, Washington, D. C.

It will be the duty of the manager of an association whose territory is invaded by any injurious insect or disease to study the market conditions and devise ways of marketing such material that will be profitable to the owners. In some cases this will mean the introduction of special industries or machinery to work up the material. In many white pine forests which have been seriously infected by the weevil the trees are very crooked, yet the portions of the logs between the whorls of branches are of excellent quality for matches or other short material. When an association controls a sufficient amount of such material, it will be practicable to arrange for the introduction of an industry for working it up.

In many regions pine reproduces especially well under birch or other inferior trees which, in a few years, will kill out or seriously damage the pine if left to shade and rub against it. Under present conditions this birch is usually marketable for fuel alone, and for this it is only a second-rate wood. When a sufficient amount of birch is controlled by an association, it will be possible to introduce an inexpensive plant for making spool or bobbin stock, thus giving the owners a profit from the birch and a chance to free the pine and to make it much more profitable in the future.

Abandoned fields often reproduce to an exceedingly thick stand of spruce or pine, in which the trees are so closely crowded that their growth is seriously interfered with. Under the present conditions it is impracticable to thin such stands, because there is no market for the material cut. It may not always be possible even for an association to find an industry to utilize this material, but it will be easier for an association controlling a large area than for a single owner.

COOPERATIVE MARKETING AND COMMUNITY DEVELOPMENT.

Not the least valuable result to be expected from cooperative forest products associations is the establishment of permanent local industries and the attendant prosperity of the community as a whole, in sharp contrast to the exploitation of forests by temporary industries and imported labor.

This country has much to learn from such countries as France regarding the proper handling of woodlands and the development of permanent local industries. "The lumber industry in France is composed of many enterprises, stable and permanent in character, and adapted in size to utilize the material that regularly may be taken from the forests. Compared to American standards, individual sawmills and their contributing logging operations are small. The industry, however, has become an essential factor in the community. Labor is local and permanent. Many persons work in the woods and in the mills a part of the time and at other seasons on the farms and in other undertakings. Thus, in many mountain sections, the woods work is pretty largely carried on by the peasants. The trees are cut at one time of the year and brought to the roads, and later on are hauled out by the peasants when their oxen, horses, or mules are not used for farm or other work. So, also, many local people work part time in the sawmills and the concerns that make a great variety of products from the forests."[1]

[1] Effect of the War on the Forests of France, by Col. H. S. Graves, American Forestry, December, 1918, vol. 24, No. 300.

Throughout France are local industries manufacturing a great variety of articles from wood. The manufacture of barrels and casks is of great importance in the wine-growing section. Furniture and cabinet shops are found in nearly all large towns and in many small ones. Quantities of wood are used in the manufacture of wooden shoes and wooden soles and heels. In addition to these and other industries using wood on a large scale, there are thousands of small woodenware factories and a multitude of home industries that use wood. Great quantities of toys, fans, paper knives, brushes, spoons, handles, spindles, funnels, and boxes of various kinds are turned out by the farmer-workmen all over France. Wood is obtained from the nearby forests and mills, the peasant workers having their own lathes which they use at odd times.

In the United States the tendency in the past has been too much to develop the wood-using industries as temporary affairs entirely apart from the community life. Forest resources have been exploited on such a large scale that imported labor has been required to supplement the local labor. The result is that after a few years' operations the timber resources are gone, and there is no profitable winter work for the farmers. This has been one of the important causes for the abandonment of farms and of whole communities in the less favorable agricultural regions. Certain localities in New England, Pennsylvania, and other States illustrate this regrettable condition.

It is not claimed that cooperative marketing associations alone will rectify all the mistakes of the past, but it is believed that they may be of great service in building up permanent wood-using industries near the bases of supplies, and in developing more prosperous rural communities.

ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE.

April 23, 1924.

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This bulletin is a contribution from

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WASHINGTON : GOVERNMENT PRINTING OFFICE : 1924

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